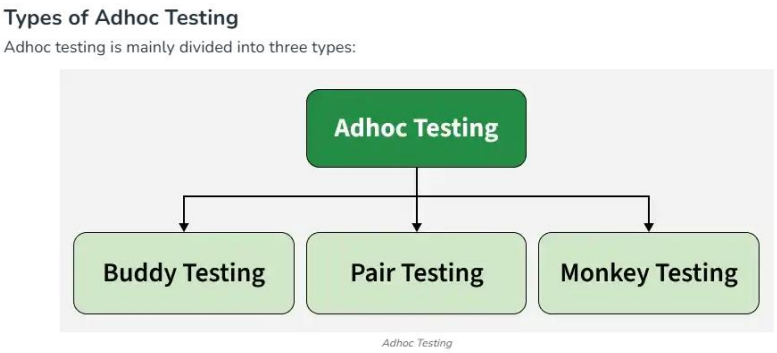
## UNIT III – PERFORMANCE AND REGRESSION

Factors – Methodology – Tools – Challenges. Regression Testing: Types – Methods. Internationalization Testing – Ad-hoc Testing: Buddy and Pair Testing – Exploratory Testing– Iterative Testing – Agile and Extreme Testing. Usability and Accessibility Testing.

### Ad Hoc Testing

**Ad Hoc Testing** is an informal and unplanned testing technique used to find defects without following predefined test cases or documentation. It relies on the tester's knowledge, experience, and intuition to identify unexpected bugs that may be missed during formal testing. Ad hoc testing is useful when there is limited time, such as just before software release, as it helps quickly detect critical issues without creating detailed test cases.

- ❖ It is performed without documentation, test cases, or test design.
- ❖ It helps to identify bugs that may be missed during structured testing.
- ❖ It is conducted after formal testing is completed.
- ❖ Takes less time compared to other testing methods.



Adhoc Testing

## Buddy Testing

1. Buddy Testing is performed by a **developer and a tester together**.
2. Both work on the **same module**.
3. The **tester provides test inputs** and checks the application.
4. The **developer observes and fixes defects immediately**.
5. It provides **quick feedback and faster debugging**.

## Pair Testing

1. Pair Testing is performed by **two testers working together**.
2. **One tester executes** the test cases.
3. The **other tester observes and records** the results.
4. It improves **test coverage** by sharing ideas.
5. It helps find **more defects through teamwork**.

## Monkey Testing

1. Monkey Testing is performed by **giving random inputs** to the application.
2. It **does not follow predefined test cases**.
3. Testing is **random and unplanned**.
4. It checks how the application behaves under **unexpected conditions**.
5. It helps find **unexpected or hidden bugs**.

## Features of Ad Hoc Testing

1. It is **random and informal** testing.
2. It is **performed without test cases or documentation**.
3. It is usually done **after formal testing**.
4. It **does not follow a structured process**.
5. It **takes less time** to perform.
6. It helps find **unexpected bugs** that may be missed during regular testing.

## Workflow of Ad Hoc Testing

1. **Understand the Application:** Learn the basic features and how the application works.
2. **Choose Important Areas:** Select critical or frequently used modules for testing.
3. **Decide What to Test:** Make a simple mental plan without writing test cases.
4. **Perform Random Testing:** Use random inputs and actions to test the application.
5. **Check the Results:** Observe whether the application behaves correctly or shows errors.
6. **Report Defects:** Record any bugs or issues found during testing.
7. **Retest After Fixes:** Test the application again after defects are fixed to ensure they are resolved.

## Advantages of Ad Hoc Testing

1. It can be performed **at any stage** of software development.
2. It helps find **unexpected defects** that may not be covered by test cases.
3. Developers can use it to **improve the quality** of their code.
4. It is **quick and saves time** compared to formal testing.
5. It **does not require test cases or documentation**.

## Disadvantages of Ad Hoc Testing

1. It requires **experienced testers** with good knowledge of the application.
2. **Inexperienced testers** may not perform it effectively.
3. It is **difficult to reproduce bugs** because there are no test cases or documentation.
4. Some defects may be **missed due to random testing**.
5. It is **not suitable for tracking or repeating tests**.

**Example: Mobile App**

A tester performs random actions on a mobile application:

- Switch between screens rapidly
- Rotate the device frequently
- Use the app with low internet connection
- Open multiple features at once

This may uncover performance issues, UI glitches, or app crashes